

## FOUR OCHODÆUS NEW TO THE UNITED STATES.

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Working over some neglected material, I found, to my surprise, that the specimens of *Ochodæus* collected by me last year in Arizona are separable into three distinct species, none of which agree with the descriptions of the North American species. A few years ago my brother sent me from California, with some other material, two specimens of what I take to be an *Ochodæus*. Unfortunately, I misplaced one of the specimens, and not wishing to dissect the single remaining one, I leave this species in this genus for the present, till more material is available.

*Ochodæus planifrons*, new species.—Male: Ferruginous-brown. Head sub-convex, granulate; clypeus short, transverse, broadly arcuate-truncate in front, feebly sinuate at sides, frontal margin single, clypeal suture feebly impressed, but visible; labrum deeply arcuate-emarginate. Prothorax moderately densely granulate, and with very short stiff semi-erect hairs, median impression obsolete. Elytra punctate-striate, intervals feebly convex, not densely punctate, punctures irregularly placed, each bearing a coarse, short hair, these are slightly longer at apex and sides than on the disk; sutural angle obtuse. Propygidium with a longitudinal, nearly parallel, median groove, apical margin strongly beaded. Mentum slightly longer than broad, deeply, longitudinally concave at middle. Prosternum arcuate-truncate in front. Anterior tibiæ tridentate, the upper tooth very small, and nearer the base than the second tooth. Posterior femora with a triangular tooth at apex; posterior tibiæ, inside at about apical fourth obtusely toothed or rather angulate; first joint of hind tarsi long, elongate. Body beneath moderately clothed with long hairs.

Female: Differs only from the male by having the hind tibiæ simple, the hind femora at apex with a smaller and more obtuse tooth and the clypeus slightly broader.

Length, 5 mm.

Huachuca Mts., Arizona. July and August.

This species, by the form of the male hind tibiæ, is very distinct from the described species, and is best placed after *Ulkei* in Dr. Horn's table.\* The size, as usual, is variable; some are larger than the above measurement,

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\*Trans. Am. Ent. Soc., Vol. V., p. 180.

others smaller; in the larger specimens the angulation on inner side of hind tibiae is more prominent than in the smaller specimens.

*Ochodæus inarmatus*, new species — Brownish-ferruginous. Head and clypeus coarsely rugose, front with a short transverse carina, which is emarginate at middle; behind the carina the surface is less coarsely sculptured than before; clypeus hemihexagonal, margin single, clypeal suture distinct, but feebly impressed. Labrum broadly, not deeply emarginate. Prothorax relatively coarsely and densely granulate and with very short recumbent hairs. Elytra striate-punctate, intervals feebly convex, moderately coarsely punctured, punctures irregular, and each bearing a short setiform erect hair; sutural angle sinuate. Apical margin of propygidium narrowly interrupted at middle with a small acute tubercle on each side. Mentum longer than broad, deeply longitudinally impressed from base to apex, the latter broadly emarginate. Prosternum arcuate in front. Posterior femora and tibiae simple. Body beneath sparsely clothed with moderately long hairs.

Length, 7 mm.

Huachuca Mts., Arizona. July and August.

The head behind and before the emarginate frontal carina is shallowly impressed. The two sexes do not seem to differ, except that the head in what I consider the female is less distinctly carinate and hardly at all impressed before and behind the carina; otherwise there is scarcely any difference in the large series before me, except in size. The measurement is taken from one of the larger specimens. This species has to be placed with *peninsularis*, near *biarmatus*, in Dr. Horn's table, from both distinguished principally by the emarginate frontal carina of the head. From the Mexican *luridus*, which has a similar armature of the head, it differs by the coarsely-sculptured head, the irregular punctuation of the elytral intervals and the larger upper tooth of the anterior tibiae, which is situated nearer the second tooth than the base.

*Ochodæus præsidii*, Bates, Biol. Cent. Am. col., Vol. II., pt. 2, 106.— Male: Ferruginous. Head coarsely cribrate-punctate; front with a feebly-indicated carina; clypeus very narrow, with a double margin, the posterior margin more elevated and slightly more prominent at middle and at sides. Labrum feebly emarginate in front. Prothorax densely asperately punctate, with short semi-erect hairs and a posteriorly deeply-impressed dorsal line. Elytra punctate-striate, intervals feebly convex,

with irregular, not densely-placed punctures, each puncture with a recurved hair, finer and longer than in the preceding species; sutural angle obtuse. Propygidium longitudinally-grooved at middle, the sides of which are strongly divergent in front. Mentum as long as broad, suddenly narrowed in front into a small process, deeply impressed in about apical half. Prosternum broadly arcuate in front. Anterior tibiæ tridentate, the upper tooth small and further removed from the second tooth than from the base; posterior femora broad at apex, and with a large, slightly curved tooth; posterior tibiæ broad and somewhat flattened; first joint of posterior tarsi elongate, not curved. Beneath sparsely punctate and clothed with moderately long hairs, the last two segments more densely punctate than the rest of abdomen.

Female: Differs from the male by having the hind femora and tibiæ not as broad and the apical femoral tooth much smaller.

Length, 6.25-6.50 mm.

Huachuca Mts., Arizona. July and August.

Except in some minor characters, the specimens, which I refer to this species, agree well with nearly all the important ones used in separating the species in this genus, as far as given in the description. By the not entirely impressed mentum this species has to be placed with *mandibularis* and *frontalis*; from the first it differs by the form of femora and tibiæ and the different clypeus; some of these characters separate it also from *frontalis*, besides the different mentum. The frontal carina is at best feeble, and in some specimens entirely absent.

*Ochodæus estriatus*, new species.—Elongate, testaceous. Head flat, unarmed, densely punctate; clypeus very short, reflexed, clypeal margin single, thickened, arcuate; labrum strongly transverse, broadly emarginate. Prothorax punctate, punctures well separated, median line impressed, obsolete near apex. Elytra irregularly, not very densely punctate, without striæ, except an impunctate sutural, surface pubescent with fine, short hairs; sutural angles rounded. Prosternum in front subangulate at middle. Anterior tibiæ strongly tridentate; intermediate tibiæ strongly dilated towards apex and shorter than the femora; posterior trochanters prolonged into an acute process, posterior femora with a triangular, obtuse tooth slightly before apex, posterior tibiæ simple, broad and short, outer side straight, inside arcuately widening to apex; first joint of posterior tarsi elongate, as long as the three following joints; spurs of middle and

hind tibiæ dissimilar, the outer is slender and the inner pectinate on its inner margin. Body beneath, especially the abdominal segments, densely hairy.

Length, 7 mm.

Millwood, Fresno Co., California. One specimen collected by my brother.

The more elongate form, the short, strongly-widening middle and hind tibiæ, the spinous hind trochanters, the elytra without striæ, and the strongly-reflexed or rather strongly-thickened apical margin of clypeus will readily distinguish this from any of the described species; it is also remarkable by having one spur of both the middle and hind tibiæ pectinate.

This species may require a new genus, but without dissection it was impossible to find characters strong enough for such a course, and till more material is available it is best placed in *Ochodæus*, apparently possessing the characters required for this genus.

#### NEW SPECIES OF GEOMETRIDÆ.

BY JOHN A. GROSSBECK, NEW BRUNSWICK, N. J.

*Stenaspilates flavisaria*, new species.—♂. Expanse, 33–38 mm. Head, thorax and abdomen yellowish-white. Ground colour of wings yellowish-white, in some specimens washed with a fawn-brown tint. Primaries with a dark-ochreous intradiscal line crossing one-third from the base, curved broadly outward from costa, then bisinuous to inner margin. Extradiscal line brown, bounded outwardly by a narrow white line, crossing at the outer third, with a gentle outward and inward curve to cubitus 2, then with a sharp outward semicircle, and another short curve to inner margin. The basal area is more or less shaded by pale brown ochreous, most obvious toward the base of the inner margin. The central area pale ochreous to fawn-brown, darkest at the extradiscal line, becoming paler toward intradiscal line. Discal spot white, linear, distinct. The outer area with a sparse sprinkling of brown scales, the inner portion with a whitish shade at the costa, which also extends more or less through the centre of the area. The outer margin distinctly angulate at media 1 and cubitus 2. Secondaries usually with a transverse line beginning at inner margin and fading away toward costa, which corresponds to the extradiscal line of primaries; within this line the area is pale ochreous, gradually merging into the ground colour toward the base. Discal spot large, rounded, rather faint. The outer area with a sprinkling